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SUBJECT INDEX FOR SURVEY OF LITERATURE PERTAINING TO THE EQUATORIAL IONOSPHERE AND TROPICAL COMMUNICATION

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(6) # SUBJECT INDEX FOR SURVEY OF LITERATURE PERTAINING TO THE EQUATORIAL IONOSPHERE AND TROPICAL COMMUNICATION.

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ABSTRACT

This addendum is a subject index for Special Technical Report 12 on this contract, DA 36-039-AMC-00040(E), "Survey of Literature Pertaining to the Equatorial Ionosphere and Tropical Communication." The greatest numbers of subjects have to do with equatorial aeronomy, but topics under geomagnetism, jungle radio propagation radio noise, and special equipment and antennas related to studies in the fields cited are included. The literature search involved documents published over a period of about 40 years, ending with 1964, with the greater weight being placed on work published in the latter years.

PREFACE

This report is a subject index to "Survey of Literature Pertaining to the Equatorial Ionosphere and Tropical Communication," Special Technical Report 12, on Contract DA 36-039-AMC-00040(E). The literature survey in that report is organized alphabetically by the first author's last name and includes a list of the authors represented. While this organization is convenient for those already familiar with the literature of low-latitude aeronomy, the approach is less useful for other readers. The authors think a subject index enhances the value of any literature survey. This index is organized alphabetically by subject. The listings under each subject give the first author's last name and the year of publication. The user is advised to check Special Technical Report 12 for all articles by an author for the year of interest, since no distinction has been made when more than one article appears for any given author in a year.

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Geomagnetic distortion in, its nature and origin (Hasegawa 1954)

Interpretation of F2 critical frequency measurements of (Heisler 1961)

Analysis of electron density of, at Leopoldville-Binza (Herrinck 1960)

Symposium on (Hines 1960)

Geomagnetic distortion of, on the magnetic equator (Hirono 1954)

Effect of gravity and ionization pressure gradient in the vertical drift in (Hirono 1955)

Characteristics of, on the magnetic equator (Hirono 1955)

Geomagnetic distortion of, on the magnetic equator (Hirono 1955)

The latitudinal effect on the disturbance daily variation in (Kamiyama 1956)

During sunspot minimum over Ahmedabad, Delhi, and Tiruchirapalli (Kotadia 1956)

Lunar tidal variations of midday critical frequencies of, in low latitudes (Kotadia 1962)

Magnetic storm of 11 February 1958 and associated changes in, at low latitude (Kotadia 1962)

F2 REGION (Continued)

During eclipse, at Huancayo (Ledig 1946)

Vertical movement of, at Huancayo (Lewis 1953)

Ionization of, and geomagnetic latitude (Liang 1947)

Horizontal diffusion and the geomagnetic anomaly in (Lyon 1962)

Equatorial anomaly in, during sunspot maximum (Lyon 1963)

Disturbance, daily variation and the lunar daily variation in, on magnetic equator (Maeda, H., 1955)

Geomagnetic distortion of, on magnetic equator (Maeda, H., 1959)

Variation of, associated with geomagnetic variation (Maeda, K., 1952)

Theoretical study on the geomagnetic distortion in (Maeda, K., 1955)

Geomagnetic distortion in (Maeda, K., 1955)

Geomagnetic anomalies of, and their interpretation (Martyn 1955)

A survey of some problems concerning (Martyn 1962)

Variations of, associated with geomagnetic disturbances at the equatorial zone (Matsushita 1955)

Grephical representation of longitudinal effect in (Minnis 1952)

Geographical distribution of ionization in (Minnis 1960)

Geomagnetic control of (Mitra, S. K., 1946)

Ionospheric behavior in F2 region in Singapore (Osborne, B. W., 1951, 1955)

Lunar variation of f_oF2 in, at Singapore (Osborne, B. W., 1952)

Practical determination of electron content below N_{max} in (Osborne, B. W., 1952)

Electron content of, above Singapore (Osborne, B. W., 1953)

Daily index of F2-layer disturbance during IGY (Piggott 1960)

A wave-guide interpretation of, for spread F on equatorial ionograms (Pitteway 1961)

Ionospheric drift in, near magnetic equator (Purslow 1958)

Horizontal drifts in, at Waltair (Rao, A. S., 1963)

Effects of enhanced solar activity on drifts in, at Waltair (Rao, B. R., 1958)

Horizontal ionospheric drifts in, at equatorial latitudes (Rao, B. R., 1958)

Solar tidal effects in, over Delhi (Rao, C.S.R., 1957)

Total electron content in, over Madras 1959 (Rao, C.S.R., 1961)

F2 REGION (Continued)

Study of geomagnetic anomaly in, during sunspot maximum (Rao, C.S.R., 1962)

World-wide study of horizontal drift in (Rao, G.L.N., 1964)

Geomagnetic influences on, at different states of solar activity (Rastogi 1956)

Type of development of, at Ahmedabad (Rastogi 1956)

Asymmetry between hemispheres in (Rastogi 1960)

A synoptic study of, in Asian zone (Rastogi 1960)

Some effects of geomagnetic activity on (Rastogi 1961)

Lunar tide in, near equator (Rastogi 1961)

Effect of geomagnetic activity on, over central Africa (Rastogi 1962)

Longitudinal effect in, equatorial (Rastogi 1963)

Seasonal variations of lunar tidal effects in, over India (Rastogi 1963)

Some regularities in (Ratcliffe 1951)

Properties of (Roberts 1963)

Geomagnetic distortion of, at equatorial latitudes (Sarma 1956)

Disturbances in, associated with geomagnetic storm (Sato 1956)

Dynamical structure of, as deduced from world-wide daily variations (Shimazaki 1959)

Irregularities in, at Ibadan (Skinner 1954)

Some geomagnetic effects in, equatorial (Skinner 1955)

Effect of equatorial electrojet on (Skinner 1957)

Magnetic field in, at Dakar (Suchy 1956)

"Fade-out" [Sic., Suggest "blackout" (Ed.)] of (Suryanarayana 1962)

Photochemical rates in, equatorial, from 1958 eclipse (Van Zandt 1960)

Eclipse effects in (Wells 1946)

New theory of formation of (Yonezawa 1956)

Behavior of, during severe magnetic storms (Yonezawa 1963)

Time and distance correlation study of ionosonde data (Zacharisen 1963)

GENERAL IONOSPHERE

Early determination of ionospheric height (Bansal 1936)

Ionosphere research (Beagley 1952)

True ionospheric height (Becker 1959)

Tropical upper air studies (Belmont 1962)

Characteristics of the upper region (Berkner 1936)

Amplitude and phase spectrum (Bhattacharya 1963)

Total reflection of electromagnetic waves (Bose 1938)

Terrestrial Radio Waves (Bremmer 1949)

Electron density over Atlantic Ocean (Bukin 1961)

Electrical conductivity (Cowling 1963)

Ionospheric data (CSIR 1962, 1963)

Anomalous amplitude of seasonal effects in the equatorial ionosphere (Delobeau 1954)

Radar methods of study (Evans 1962)

Discussion about special ionosphere characteristics: MUF (3000) f_oF2 related to solar activity (Eyfrig 1937)

Pressure and temperature equalization at 200 kilometers (Johnson 1960)

Short-wave communication (Lied 1947)

Distribution of electrons at night (Long 1962)

Ionospheric data (NBS 1955)

Ionosphere at Allahabad (Pant 1936)

Soft corpuscular radiation at 320 kilometers near magnetic equator (Savenko 1962)

Rate of electron production in ionosphere (Seaton 1947)

Physics of fully ionized gases (Spitzer 1956)

A method of solving integral equations for the vertical propagation of time-harmonic plane waves in anisotropic vertically inhomogeneous nonmagnetic media (Tomlinson 1958)

Model (Woodward 1948)

Ionospheric data: Woomera, Australia (WRE 1963)

GEOMAGNETISM

Solar and lunar diurnal variation of (Chapman 1919)

Influence of earth conductivity on (Chapman 1922)

GEOMAGNETISM (Continued)

Geomagnetism (Chernosky 1961)

Effect on F1 layer (Eyfrig 1955)

Daily variations of the electrical conductivity of the upper atmosphere as deduced from the daily variations of (Maeda, H., 1955)

Activity and spread F (Rao, C. V. S., 1962)

Control of ionosphere-geomagnetic influences on F1 and F2 regions (Rastogi 1956)

Effects of, activity on F2 region over Leopoldville (Rastogi 1961)

Effect of, on F2 region over Central Africa (Rastogi 1961)

Effects in equatorial F2 region (Skinner 1955)

GEOMAGNETIC ANOMALY (see ANOMALIES)

GEOMAGNETIC CONTROL OF IONOSPHERE (see also FIELD-ALIGNED IRREGULARITIES: LUNAR TIDE)

Control of F2-layer ionization (Appleton 1947, 1950)

Ionospheric storms and the F2-layer anomaly (Appleton 1953)

Anomalous equatorial belt in F2 layer (Appleton 1954)

Regularities and irregularities and (Appleton 1956)

Equatorial anomalies in the F2 (Appleton 1960)

Geomagnetic nature of F2 longitude effect (Bailey 1948)

Abnormalities in F region at Calcutta (Baral 1948)

Ionospheric critical frequencies and magnetic parameters of preceding day (Bergh 1961)

Distortion of E region (Beynon 1959)

Noon F2 ionization and geomagnetic coordinates (Bhar 1959)

Influence of disturbed conditions and increased solar activity (Bhargava 1962)

Control on F2 layer (Burkard 1954)

Control of equatorial F2 layer (Chakrabarty 1946)

Anomalies in behavior of F2 layer (Croom 1959)

Control of the F1 layer (Eyfrig 1955)

Effect on the F2 region (Eyfrig 1963)

Distortion of the F2 region near the magnetic equator (Hirono 1954)

GEOMAGNETIC FIELD (Continued)

GROUND WAVE

Propagation curves (Bremmer 1949)

Propagation curves for frequencies below 10 Mc (CCIR 1963)

Propagation curves for VHF/UHF broadcasting in the African continent (CCIR 1963)

Field intensity (Dickinson 1956)

GROUP VELOCITY

Curves for propagation in ionosphere (Bajpai 1937)

And group height from magneto-ionic theory (Shinn 1952)

GYRO-FREQUENCY (see also SPLITTING)

In ionospheric regions (Datta, S., 1959)

Measured in F region over Hobart, Tasmania (Ellis 1957)

And self-gyrointeraction (Mitra, S. N., 1955)

And magnetic field of F region from h′f records (Singh, R. N., 1962)

And magnetic field in the F2 layer at Dakar (Suchy)

HUANCAYO, PERU (Continued)

Studies of height oscillations of F2 from (Burkard 1950)

Electron annihilation in F2 over (Burkard 1950)

Studies on ionospheric tidal effect at (Burkard 1951)

Spread F over (Calvert 1961)

Magnetic variation at (Casaverde 1961)

Effects of nuclear explosion over Johnston Island observed at (Casaverde 1963)

Occurrence of E_s at (Chadwick 1962)

Normality at (Chapman 1951)

Diurnal variation of the electron density of F2 at equatorial stations (Eyfrig 1950)

Study of Earth's magnetic elements and reflection from ionospheric layer at (Fleming 1933)

Lunar stratification of F2 layer at (Gautier 1951)

Abnormal variation of horizontal magnetic intensity at (Ibrahim 1953)

Lunar influence on E_s at (Knecht 1959)

The ionosphere at (Ledig 1941, 1946)

Theory of lunar effects and mid-day decrease of F2 density at (McNish 1949)

Measurements at, discussed in symposium (McNish 1950)

Lunar diurnal variation in earth currents at, compared to Tuscon (Rooney 1938)

Sudden decrease in cosmic ray intensity at (Sandstrom 1958)

Disturbances in F2 region associated with geomagnetic storms observed at (Sato 1956)

Ionospheric electron densities at (Schmerling 1958)

Behavior of 6300 OI line at (Silverman 1961)

A comparative study of geomagnetic ionospheric changes at Kodaikanal and (Sivaramakrishnan 1956)

Electron density and true height during IGY at (Somayajulu 1963)

Critical frequency observations of E layer at (Wells 1934)

Polarization of radio waves from ionosphere at (Wells 1936)

Multiple-frequency recording of radio wave polarization near geomagnetic equator from (Wells 1940)

HUANCAYO, PERU (Concluded)

The ionosphere at, July to September 1940 (Wells 1941)

Ionospheric investigations at (Wells 1942)

Eclipse effects in F2 layer observed at (Wells 1946)

F scatter at (Wells 1954)

IBADAN, NIGERIA

Sunset fading observed at (Bennington 1960)

Lunar variations at F2 layer at (Brown 1956)

Height of night-time F-layer irregularities at (Kent 1961)

Ionospheric soundings at, during eclipse of 25 February 1952 (Lejay 1956)

Equatorial spread F at (Lyon 1961)

Lunar and luni-solar variations of geomagnetic field at (Onwumechilli 1959)

Lunar daily variation of magnetic declination at (Onwumechilli 1960)

F2 irregularities at (Skinner 1954)

Multiple stratification of F layer at (Skinner 1954)

Ionospheric absorption at (Skinner 1956)

Horizontal drift measurements in ionosphere at (Skinner 1958, 1963)

Spread F at (Wright, R. W., 1956)

Lunar tides in sporadic E at (Wright, R. W., 1959)

IGY

F-layer scatter in Far East observed during (Bateman 1959)

NBS equatorial VHF scatter research during (Bowles 1957, 1959)

Measurements at magnetic equator for (Bowles 1962)

Ionospheric VHF scattering near magnetic equator during (Cohen 1963)

Reflecting properties of ionosphere between 350 and 1500 kc/s at Tsumeb during (Elling 1960)

Report on oblique-incidence sporadic-E and F-scatter program for (Finney 1960)

NBS radio, ionosphere, and airglow observations during (Gates 1959)

Daily index of F2-layer disturbance during (Piggott 1960)

Ionospheric observations at Madras during (Rangaswamy 1962)

Diurnal variation of absorption at Waltair during (Rao, B. R., 1958)

Some results of true-height survey during (Schmerling 1961)

Proton magnetometer satellite ground stations for (Shapiro 1961)

Study of spread-F occurrence during (Shimazaki 1959, 1960)

Study of occurrence of spread F in severe magnetic storms during (Shimazaki 1960)

JOHANNESBURG, SOUTH AFRICA

Sunset fading effects at (Bennington 1960)

JUNGLE RADIO COMMUNICATION

Radio communication and Loran navigation in SW Pacific (Bateman 1944)

Panama VHF and HF jungle propagation (Craig 1963)

Propagation through New Guinea rain forest (DSIR 1944)

Measurement of factors affecting propagation (Herbstreit 1943)

Measurement of attenuation by jungle (Herbstreit 1964)

Tactical jungle communications study (Krevsky 1963)

HF and VHF attenuation in jungles (Krevsky 1963)

Research-engineering for tropical communication (Vincent 1963)

MAGNETIC FIELD (see also GEOMAGNETISM)

Field of the quiet-time proton belt (Akasofu 1962)

Measurement of intensity in ionosphere (Appleton 1934)

Particle motion in equatorial plane of dipole magnetic field (Avrett 1962)

Field of the equatorial ring current (Ben'Kova 1962)

Magnetograms and hourly values at Guam (IGY 1960)

Magnetograms and hourly values at Koror (IGY 1960)

Possible asymmetry in daily range of vertical intensity near magnetic equator (Onwumechilli 1959)

Effect on ionospheric backscatter (Salpeter 1961)

The mutual dependence of harmonic coefficients (Zmuda 1960)

MAGNETIC PARAMETERS (see also K-INDICES)

Correlation with ionospheric critical frequencies (Bergh 1961)

Variation of declination at magnetic equator (Fleming 1933, 1937, 1938)

MAGNETIC STORMS (see also GEOMAGNETIC CONTROL OF IONOSPHERE; MAGNETIC ACTIVITY; IONOSPHERIC STORMS)

Enhancement of equatorial electrojet during polar substorms (Akasofu 1963)

Ionospheric effects associated with (Berkner 1939)

Ionospheric changes associated with (Berkner 1940)

Ionospheric disturbances associated with (Bhargava 1959)

Effects of, in equatorial E_s (Bhargava 1961)

And cosmic noise absorption on 25 Mc/s at Ahmedabad (Bhonsle 1960)

And normality at Huancayo (Chapman 1951)

Variations in the disturbance field on (Cynk 1939)

Some patterns of the diurnal, seasonal, and latitude distribution of (Dubrovski 1962)

Enhanced transequatorial propagation following (Ferrell 1951)

Propagation of world-wide sudden commencement of (Gerard 1959)

Statement of agreement regarding the ring-current effect (Hines 1960)

Equatorial enhancement of sudden commencements of (Jacobs 1963)

MAGNETIC STORMS (Continued)

And distribution of ionospheric disturbances during the geomagnetic bay (Kamiyama 1953)

Relationship between radio transmission path and effects of (Kenrick 1938)

Magnetic and ionospheric disturbance in low latitudes (Kotadia 1961)

Of 11 February 1958, and associated changes in the F2 layer of the ionosphere in low and middle latitudes (Kotadia 1962)

In connection with flutter fading, spread echoes, radiation belt (Lal 1960)

Solar corpuscular activity and ionization density in (Lal 1963)

Equatorial ionospheric variations during (Matsushita 1963)

Forecasting of, associated with solar flares (Nelson 1963)

Polar ionospheric disturbances associated with (Obayashi 1958)

World-wide occurrence probability of spread F during (Shimazaki 1960)

Behavior of F2 layer during (Yonezawa 1963)

MAGNETO-HYDRODYNAMICS

Plasma physics and (Auckland 1962)

Magneto-hydrodynamics (Ferraro 1955)

MAGNETO-IONIC THEORY

Particle motion in the equatorial plane of a dipole magnetic field (Avrett 1962)

Absorption of radio waves in resonance regions of a non-homogeneous plasma (Denisov 1959)

Theory of electrostatic fields in a horizontally stratified ionosphere subject to magnetic field (Farley 1959, 1960)

Absorption of HF radio waves under conditions where the QT approximation is valid (Hagn 1963)

Induction of electric currents in a nonisotropic, non-uniform ionosphere, by magnetic potential (Hanna 1959)

Dispersion and absorption curves for ionospheric propagation according to the (Martyn 1935)

Refractive and absorptive indices derived from (Murty, Y.S.N., 1963)

And its applications to the ionosphere (Ratcliffe 1959)

Group velocities and group heights from (Shinn 1952)

MULTIPATH

Correlation between frequency selective fading and (Ames 1963)

MULTIPLE REFLECTIONS

High, from F2 at Brisoane (Baird 1954)

Discrepancies in ionospheric absorptions deduced from (Piggott 1960)

OBLIQUE INCIDENCE

Effect of magnetic field over equatorial region (Chatterjee 1952)

Experimental results (Delobeau 1955)

Skip distance of radio waves and propagation of microwave (Hulburt 1935)

MUF factor and solar activity (Rao, C.S.R., 1962)

Fading of medium wave transmissions at (Rao, M. S., 1958)

Long-distance pulse propagation experiment on 20.1 Mc/s (Silberstein 1958)

Pulse observation near MUF (Somayajulu 1952)

SOLAR ACTIVITY (Continued)

Related to ionospheric irregularities and earth magnetism (Lejay 1959)

Terrestrial magnetic and ionospheric effects associated with, bright chromospheric eruptions (McNish, 1937)

Ionospheric changes associated with, event of 23 February 1956 (Minnis 1956)

And some indices based on ionospheric and radio noise measurements (Minnis 1959)

E_s occurrence in relation to (Mitra, R. K., 1963)

Effect of enhanced, on F2 region at Waltair (Rao, B. R., 1958)

MUF factor and (Rao, C.S.R., 1960)

Variation of critical frequencies with (Rastogi 1957)

Geomagnetic influence on F1 and F2 regions and (Rastogi 1959)

Altitude of tropopause near equator and (Stranz 1959)

SOLAR ECLIPSE

Ionospheric observations on F regions during, of April 19, 1958 (Datta, S., 1959)

Effects of, on 25 February 1952 (Estrabaud 1952, 1953)

Behavior of F2 region during (Gliddon 1962)

Effects on ionosphere at Huancayo during, of 25 January 1944 (Ledig 1946)

F2 region ionosphere soundings in equatorial Africa during, of 25 February 1952 (Lejay 1956)

Of 25 February 1952, ionospheric behavior at Khartoum during (Minnis 1955)

Of 20 June 1955, ionospheric changes in Singapore during (Minnis 1957)

Of 14 December 1955, ionospheric changes at Singapore during (Minnis 1959)

Of 14 February 1934, measurements of ionospheric heights and radio observations in South Sea Islands during (Minohara 1934)

Partial, of 25 February 1952, and its effect on ionosphere (Mitra, S. N., 1953)

Observations at Ahmedabad, field-strength measurements and vertical-incidence soundings during (Rastogi 1955, 1956, 1957, 1958, 1959)

SPORADIC E (Continued)

Echoes in east-west plane from, equatorial--E_{ss} (Bowles 1962)

Observations of waves reflected from (Briggs 1951, 1954)

Variations in frequency of occurrence of (Chadwick 1962)

Nature and origin of, over Calcutta--E_{sq}, E_{sm} (Chatterjee 1953)

On the nature of, equatorial slant E_s--E_{ss}, E_{sq} (Cohen 1962)

Solar activity and the occurrence of (Das Gupta 1962)

In temperate zone, report on the IGY oblique-incidence program (Finney 1960)

Field-aligned irregularities in--E_{ss}, E_{sc}, $E_{s\varphi}$, E_D (Goodwin 1962, 1963)

Observations of occurrence and movement of (Harwood 1961)

In temperate zone (Heisler 1960)

Rapid variations in--E_{sn} (Heisler 1962)

Occurrence, correlation with horizontal geomagnetic field component (Heisler 1964)

Irregularities in E region, caused by atmospheric electricity (Isted 1955)

Lefthanded ionospheric echo from (Khastgir 1960)

Spiral distribution of, in polar regions (Kamiyama 1962)

And dependence of f_oE_s on ionosonde system gain--E_{sn}, E_{sq} (Kerblai 1960)

Additional lunar influence on, at Huancayo--E_{sq} (Knecht 1959)

On the width of the equatorial belt of--E_{sq} (Knecht 1962)

Over Ahmedabad--E_{sn}, E_{sc}, E_{ss} (Kotadia 1956)

Equatorial zone, and the electrojet (Kotadia 1962)

Occurrence of, during IGY (Leighton 1962)

Geomagnetic and ionospheric relations and (Lewis 1953)

Theoretical interpretation on, equatorial--E_{sq} (Maeda, K., 1963)

E_s-region ionization, spread F, and radio star scintillation--E_{sq}, E_{sn} (Martyn 1959)

Intense, near the magnetic equator and at the auroral zone (Matsushita 1951, 1952)

Lunar tidal variations in (Matsushita 1953)

Some studies of (Matsushita 1954)

Lunar effects on--E_{sq} (Matsushita 1955, 1957)

SPORADIC E (Continued)

SUDDEN COMMENCEMENT (Continued)

Observed by geomagnetic fluctuations in period range 0.3 to 120 seconds (Benioff 1960)

Observed with Doppler technique (Davies 1962)

Propagation velocity of (Dessler 1958)

Daytime enhancement of size, at Huancayo (Forbush 1955)

Propagation of (Gerard 1959)

Equatorial enhancement of (Jacobs 1963)

Ionospheric currents responsible for (Ondoh 1961)

Longitudinal irregularities in lunar tide, and, near magnetic equator (Rastogi 1963)

SUNRISE

The early-morning E2 layer and some evidence of presunrise F layer splitting (Bandyopadhyay 1959)

Effects on F region over Kodaikanal (Bhargava 1952)

Modification of effect during magnetic storms (Bhargava 1962)

Effect on VLF (Rieker 1963)

F layer at (Rishbeth 1960)

Presunrise splitting and lunar tide (Rastogi 1963)

SUNSET (see also FLUTTER FADING)

Effect on equatorial ionosphere (Appleton 1954)

Rapid rise of F layer after (Appleton 1960)

Fading effects at Singapore, Johannesburg, and Ibadan (Bennington 1960)

Frequency-spreading of spread F near (Bowman 1960)

Instability of equatorial F layer after (Calvert 1963)

Effect, equatorial (Humby 1959)

Fading effect, some measurements of (Koster 1963)

On the cooling of the upper atmosphere after (Lowan 1955)

Rise of f_oF2 after (Rao, B.C.N., 1963)

SYMPOSIA (Continued)

Conference on ionospheric physics (Pennsylvania State College 1950)

International symposium on equatorial aeronomy (Smith, E. K., 1962)

International symposium on fluid mechanics in the ionosphere (1959), (agenda on page 228)

TIRUCHIRAPALLI, INDIA

Ionospheric F2 layer during sunspot minimum (Kotadia 1956)

TOPSIDE SOUNDING

Studies of spread F using (Calvert 1963)

Of the ionosphere (Knecht 1962)

Low-latitude field-aligned ionization observed by, Alouette satellite (Lockwood 1963)

Propagation along field-aligned sheets of ionization observed by, Alouette (Muldrew 1963)

TOWNSVILLE, AUSTRALIA

Anomalous transequatorial VHF propagation recorded at (Carman 1963)

TRANSEQUATORIAL

Virginia to Ghana on 17.5 Mc/s (Agy 1962)

Prediction of MUF over paths (Allcock 1956)

Study of scatter mode (ARRL 1959)

Anomalous VHF propagation (Carman 1963)

Reception of VLF (Chilton 1964)

Propagation of VHF signals (Cracknell 1959, 1960)

Enhanced propagation following geomagnetic storms (Ferrell 1951)

Study of propagation phenomena (HRB-Singer, Inc. 1961)

Scatter, scintillation, and spread F (Koster 1960)

Nighttime scatter at 50 Mc/s (Southworth 1960)

Backscatter observations of magnetically controlled ionization at Brisbane (Thomas 1961)

Propagation, general effects (see Thomas 1961 through 1964)

Instrumentation for observation for field-aligned F-region irregularities (Thomas 1962)

Ray tracing and mode analysis (Thomas 1962)

Observations of propagation from Brisbane (Thomas 1962)

Lunar control of abnormal propagation (Thomas 1962)

Anomalous propagation, cross and auto correlation effects associated with, at 16 Mc/s (Thomas 1962)

Air-to-ground propagation in band nine (Kirby 1963)

VELOCITY

Curves for radio wave propagation (Bajpai 1937)

Group velocities and group heights from magnetoionic theory (Shinn 1952)

VERTICAL INCIDENCE (see also CRITICAL FREQUENCIES, f_oF2)

Ionospheric critical frequencies and magnetic parameters (Bergh 1961)

Ionospheric observations over Atlantic Ocean (Bukin 1961)

Studies on ionospheric tidal effect on critical frequencies at Huancayo (Burkard 1951)

Penetration of thin ionospheric layers at (Deb 1940)

Solar eclipse 25 February 1952 in equatorial Africa--effects on E region (Estrabaud 1953)

Correlation analysis of fading of radio waves reflected at (Fooks 1961)

Observations of occurrence and movement of sporadic-E ionization (Harwood 1961)

Relationship between f_oF2 and magnetic phenomena (King 1962)

VHF PROPAGATION

NBS scatter research program (Bowles 1957)

Transmissions across the magnetic equator (Bowles 1960)

Anomalous transequatorial (Carman 1963)

Propagation curves for broadcasting in Africa (CCIR 1963)

Scatter (Cohen 1963)

Radio-wave attenuation through jungle and woods for (Krevsky 1963)

SID effect on VHF scatter associated with solar outburst 29 July 1958 (Obayashi 1960)

Sporadic E observed on oblique-incidence circuits (Smith 1958)

Nighttime equatorial scatter on 50- and 144-Mc/s--radio amateur VHF transequatorial scatter observations during IGY (Southworth 1960)

VHF transequatorial propagation via F layer (Washburn 1963)

VIRTUAL HEIGHT (see also TRUE HEIGHT)

Variation of noon values (Appleton 1950)

Rapid increase of, for F layer after sunset (Appleton 1960)

Calculation of (Titheridge 1959)

Analysis of nighttime h′(f) records (Titheridge 1961)

New method for analysis of ionospheric h′(f) records (Titheridge 1961)

Measurements in Bengal (Sen Gupta 1936)

VLF PROPAGATION

Measurements for the Radux-Omega navigation system (Casselman 1959)

Transequatorial reception of (Chilton 1964)

Mode theory of, in presence of transverse magnetic field (Crombie 1960)

Reflection from a sharply bounded ionosphere for propagation perpendicular to the magnetic meridian (Crombie 1961)

Nonreciprocity along magnetic equator (Crombie 1963)

Attempt to observe whistlers near magnetic equator (Koster 1955)

Sunrise and sunset effects on (Rieker 1963)

Summary of literature pertaining to (Whitson 1962)

WALTAIR, INDIA

Polarization of E_s echoes at (Abhirama Reddy 1962)

Structure of E_s at, as deduced from polarization observations (Abhirama Reddy 1963)

Z echo at (Abhirama Reddy 1963)

Theoretical wave polarization at vertical incidence (Abhirama Reddy 1963)

Nocturnal and seasonal variations of spred F at (Krishnamurthy 1963)

Absorption on 5.65 Mc/s at (Ramana 1961)

Horizontal drifts in F2 region at (Rao, A. S., 1963)

Horizontal drifts in E region at (Rao, A. S., 1964)

Investigations of ionospheric wind by spaced receiver method at (Rao, B. R., 1956)

Diurnal variation of absorption at (Rao, B. R., 1958)

Effect of enhanced solar activity on F2 region drifts at (Rao, B. R., 1958)

Effect of magnetic activity on drifts over F2 regions at (Rao, B. R., 1959)

Study of horizontal drifts in F1 and F2 regions at (Rao, B. R., 1959)

F1 region drifts at (Rao, E. B., 1961)

Study of drifts at (Rao, E. B., 1961)

The F region over (Rao, E. B., 1961)

Long-period fading in medium radio signals at (Rao, M. S., 1955)

Influence of weather conditions on field strengths received at, by a long-distance short wave transmission (Rao, N. S. S., 1950)

Horizontal drifts in E region at (Rao, R. R., 1960)

Height gradient of horizontal drift in E region over (Rao, R. R., 1961)

Investigation of traveling disturbance by CW at (Somayajulu 1953)

WASHINGTON, D.C.

Anomaly in total electron content--summer decrease (Altman 1963)

Non-seasonal changes of F2-region ion density at (Berkner 1938)

Requency of occurrence of E_s over (Chadwick 1962)

WATHEROO, AUSTRALIA

Small differences in monthly mean f_oF2 at (Bannon 1946)

Characteristics of upper ionosphere at (Berkner 1936)

Abnormal ionization of E region at (Berkner (Berkner 1937)

Non-seasonal change of f_oF2 region at (Berkner 1938)

Ionospheric changes (Berkner 1940)

Systematic ionospheric changes (Berkner 1940)

WEATHER

At Macao, correlated with ionospheric height (Gherzi 1952)

The influence of weather conditions on long distance short wave transmission (Rao, N. S. S., 1950)

WINDS

Tropical upper air studies (Belmont 1962)

Some phenomena of the upper atmosphere (Chapman 1951)

In the dynamo mechanism for the magnetic diurnal variation (Forbush 1950)

Interpretation of, as drifts in F2 region (Martyn 1955)

Ionospheric, at Waltair (Rao, B. R., 1954, 1956)

Stratospheric, and 26 or 27-month periodicity in equatorial geomagnetic field (Stacey 1962)

Ionospheric current systems caused by, non-periodic (Van Sabben 1962)

Z ECHO (see also SPLITTING, POLARIZATION)

At Waltair (Abhirama Reddy 1963)

Attributed to partial reflection of ordinary echo (Satyanarayana 1959)